Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amending the Definition of Interconnected VoIP Service in Section 9.3 of the Commission's Rules	)	GN Docket No. 11-117
	)	
Wireless E911 Location Accuracy Requirements	)	PS Docket No. 07-114
	)	
E911 Requirements for IP-Enabled Service Providers	)	WC Docket No. 05-196
	)	

REPLY COMMENTS OF YMAX CORPORATION

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YMax Corporation ("YMax"), through its attorneys, hereby respectfully submits its Reply Comments in response to the Federal Communications Commission's ("Commission" or "FCC") Further Notice of Proposed Rulemaking in the above-captioned proceedings.[1] YMax's Reply Comments focus specifically on "what advanced technologies, if any, permit portable interconnected Voice over Internet Protocol ('VoIP') service providers to provide automatic location information ('ALI')."[2] Comments to the FNPRM suggest that there is no ALI solution for interconnected VoIP currently available. YMax files these reply comments to remind the Commission of a solution that bridges the gap between future ALI technology still theoretical or in development, and the present-day need for ALI for interconnected VoIP.

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[1] *See Third Report and Order, Notice of Proposed Rulemaking, and Second Further Notice of Proposed Rulemaking*, PS Dkt No. 07-114 & WC Dkt No. 05-196, FCC 11-107 (rel. July 13, 2011) ("*FNPRM*").

[2] *Id.* ¶ 29.

YMax agrees with the Commission that "given the increasing popularity and adoption of interconnected VoIP services, the provision of accurate location information to PSAPs is becoming essential information to facilitate prompt emergency response and protect life, health and property."[3] The record over the years in these proceedings makes clear the limitations of a registered location-based system.[4] The FCC has encouraged nomadic VoIP providers to find new solutions, and indicated it would look toward mandating an automatic system that would not require customer action.[5] YMax believes that the Commission should require interconnected VoIP providers to provide ALI. Indeed, as YMax has detailed in previous filings in this rulemaking proceeding, YMax has developed and demonstrated for the Commission and for public safety officials a working prototype of a technology that would enable interconnected VoIP providers to deliver ALI with 911 calls placed by nomadic callers -- today.[6]

About YMax and its magicJack® ALI Solution

Through its magicJack subsidiary, YMax sells the magicJack® device, which plugs into the USB port of a desktop or laptop computer. YMax also recently introduced the magicJack PLUS™, which plugs directly into a broadband connection such as a router and does not require a desktop or laptop computer to operate. With licensed software, customers can then subscribe to various VoIP services. Any standard telephone can be plugged into the telephone jack on the

[3] FNPRM ¶ 69.

[4] *See, e.g.*, Comments of YMax Corporation, August 20, 2007.

[5] *See Wireless E911 Location Accuracy Requirements; E911 Requirements for IP-Enabled Serv. Providers*, PS Dkt No. 07-114 & WC Dkt No. 05-196, Further Notice of Proposed Rulemaking and Notice of Inquiry, at ¶ 4, 27, FCC 10-177 (rel. Sept. 23, 2010) ("*FNPRM*").

[6] *See Wireless E911 Location Accuracy Requirements*, PS Dkt No. 07-114, Reply Comments of YMax Corp. (filed Sept. 18, 2007); Comments (filed Aug. 20, 2007); *see also* Presentation, YMax Corp., magicJack VoIP E911 Automatic Location Information ("ALI") Technology Solution (filed May 12, 2009 & Mar. 25, 2008).

magicJack device. Using the Internet (including a cable modem, DSL, Wi-Fi or other system), customers are able to call other magicJack devices wherever located, any PSTN-connected telephone as well as customers of other VoIP services. The magicJack device also enables customers to receive calls from any other magicJack device, PSTN-connected telephone and other VoIP services.

As the Commission has acknowledged, the nomadic nature of such services makes the provision of location information problematic. As a solution, YMax's next-generation magicJack® incorporates a GSM cellular transceiver into the device, which can work in tandem with a customer's registration information to provide more accurate location information. In the event a 911 call is placed, the magicJack can perform location calculations to determine where the device is located and whether that location matches one of the locations the customer has registered.

Furthermore, the magicJack® performs location calculations and comparisons to the customer's registered locations in order to notify a customer if a registered location does not match within a certain distance of the calculated location. The magicJack® can scan through all GSM frequencies to collect information automatically when the device is turned on and periodically thereafter. The magicJack® can then take the location information it receives based on the tower locations and signal strengths, and compare it to the customer's registered locations. If the calculated location does not match one of the customer's registered locations within a certain distance, magicJack will prompt the customer to update his or her address for 911 purposes, including to add or update a registered address with additional information about the customer's vertical location within a building, which then could be delivered to the PSAP along with ALI sent with the call. The next-generation magicJack can also send maps and calculated

locations to assist customers in updating their location information in those instances where they might be unsure of their location. The next generation magicJack® can also use GSM and Wi-Fi networks, or other signals, to calculate location, further enhancing accuracy. Thus, the magicJack can transmit to the PSAP its own calculated location and the customer's registered location(s).

The next-generation magicJack can also perform network comparisons in order to determine whether it is more effective to transmit the emergency call over a broadband connection or a GSM network. The customer's broadband connection could be used to send the call when the calculated location of the caller is in close proximity to one of the customer's registered locations. However, should the calculated location differ from the customer's registered locations, or if there is no other Internet connection or ALI databases have not yet been updated, the call can be sent via a GSM network.

When the call is sent via the GSM cellular transceiver, the CMRS provider will route the call, including the location information that it obtains for all other 911 calls, to the appropriate PSAP.[7] The call will be displayed to the local PSAP as a non-service initialized call with network-based location data. The PSAP will be able to see the CMRS network's location information, as well as the location information calculated by the next-generation magicJack® and the customer's registered location(s), which could include apartment numbers, room numbers and/or floors. By transmitting such registered location along with the CMRS network's location data, YMax's ALI solution can provide PSAPs with information on the vertical location of emergency callers that would not currently be included in ALI transmitted by CMRS networks.

[7] 47 C.F.R. § 20.18(d) (requiring CMRS providers to provide telephone number and location information for 911 calls from any mobile handset accessing their systems).

YMax has a fully functional prototype of this ALI solution that successfully has completed test calls to PSAPs. This ALI solution has been demonstrated to the FCC, representatives of the public safety community and a focus group of PSAPs from around the country.

The capabilities in the next-generation magicJack could also be implemented into a laptop, VoIP handset or cordless base unit, analog telephone adapter ("ATA") or otherwise. Advancements in emergency calling capabilities should be distributed as broadly as possible, especially for consumers of nomadic VoIP services. YMax therefore plans to license the use of its technology[8] to other nomadic VoIP providers on reasonable, non-discriminatory terms and conditions in compliance with the Commission's patent policy and numerous Commission proceedings dealing with the use of patented technologies,[9]

YMax's Next-Generation magicJack is a Practical ALI Solution for Nomadic VoIP Today, Not a Theoretical Future Possibility

Numerous comments to the FNPRM claim that more accurate ALI for VoIP cannot be achieved yet because no ALI solution exists. For example, Vonage Holdings Corp. claims that "there is no reliable autolocation service for nomadic VoIP available today".[10] The National Cable & Telecommunications Association says that "the integration of…passive commercial mobile radio services (CMRS) receivers into portable VoIP devices to provide ALI is not

[8] YMax has a series of patent applications pending with the U.S. Patent & Trademark Office and internationally.

[9] *See Revised Patent Procedures of the Fed. Commc'ns Comm'n*, Public Notice, 3 F.C.C.2d 1, App. B (1966); *see also, e.g.*, *Digital Audio Broad. Sys. & Their Impact on the Terrestrial Radio Broad. Serv.*, Further Notice of Proposed Rulemaking and Notice of Inquiry, 19 FCC Rcd. 7505, 7527, ¶ 57 (2004) (examining whether iBiquity was entering into licensing agreements for its IBOC system for digital radio "under reasonable terms and conditions that are demonstrably free of unfair discrimination.").

[10] Comments of Vonage Holdings Corp. (Vonage) at 16.

currently a viable solution for fixed, indoor services."[11] But relying on a registered location is not a key problem for a fixed, indoor service -- rather, it is reliance on a registered location for nomadic services that has been shown to be problematic.

Such commenters overlook the capabilities of YMax's next-generation magicJack. As discussed above, YMax's next-generation magicJack improves upon the existing registration method by supplementing it with CMRS (and other) network location-based information. magicJack's ALI solution also addresses the call back capability of VoIP devices. The current practice for non-service initialized cellular calls allows transmission to the PSAP of 10 digits, with 911 being the first three digits. magicJack can transmit a seven-digit serial number that is dynamically mapped to a caller's standard 10-digit VoIP call back number. Alternatively, the current practice can be changed to allow for transmission of the VoIP caller's full phone number.

Other commenters identify their own ALI technologies that are in the early stages of development. Boeing, for example, presented its "BTL" technology,[12] which uses the Iridium satellite to provide a "louder" signal than GPS and penetrate buildings. Boeing claims its BTL technology can work on VoIP devices but, by its own estimate, it will not be available for VoIP until 2013.[13]

What the submissions of other commenters have made clear is that YMax's technology is the only ALI solution for nomadic VoIP providers that has been shown to work now, that can be adopted now -- and that can start helping public safety officials to save lives and property now. YMax agrees that E911 innovation should continue, and is hopeful that new technologies may someday provide the perfect solution. But in the interim, if a more accurate ALI method exists

[11] Comments of the National Cable & Telecommunications Association (NCTA) at 4.
[12] Comments of the Boeing Company (Boeing) at 20.
[13] Boeing at 30.

today, particularly one that can work with and enhance current registered location requirements, it should be made available to 911 callers now while other theoretical technologies are designed and tested -- a process which will take years. The YMax technology is the most accurate, least cost, easiest to use option available.

Conclusion

As nomadic VoIP services gain wider acceptance, the Commission should ensure that PSAPs receive ALI as well as registered location information to respond most effectively when nomadic VoIP users make emergency calls. Although there has been much discussion of potential solutions by technology yet to be developed, it is clear from the record in this proceeding that today only YMax's solution, which has already been demonstrated to the FCC and to the PSAP community – would enable nomadic VoIP service providers to begin to deliver reliable location information to the PSAP now even if the caller has not registered his or her current location or the registered location has not yet been updated. The Commission should ensure that nomadic VoIP services provide -- and consumers benefit from -- the more reliable location accuracy made possible by YMax's ALI technology solution.

Respectfully submitted,

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